Remarks

This amendment is submitted in response to the Office Action of October 4, 2002. Reconsideration and allowance of the claims is requested.

In this office action, at page 2, with respect to the drawings, the Examiner requires the e-coating be shown on the surface of the stack. Therefore, Figure 3 has been changed to show the e-coating which is clearly described in paragraphs 21 and 22 as having been sprayed onto the stator stack. The e-coating itself is of course well known; it appears in the prior art cited by the Examiner and over which this invention comprises an improvement. It was in the specification as filed and therefore is not new matter.

The Examiner further objects to the specification as leaving it unclear what comprises the so-called e-coating. However, such coating was described as covering the surface of the stack, and being necessary to be scraped away to provide electrical contact between base and the stack. It is clearly a insulating coating as is well known in the art and is described in the reference cited by the Examiner. Therefore the coating was described with sufficient detail to inform a person of skill in the art in the application as filed. The Examiner in paragraphs 2 and 3 further objects to the e-coating as not having its materials specifically described. However, the specific material used in this e-coating is not relevant to the present invention. Rather, it is well known in the field and is described with sufficient specificity both in the application beginning at page 6 and in the prior art cited by the Examiner. The coating is simply a coating sprayed onto the surface of the stack to prevent unnecessary or undesired electrical contact; therefore, its elimination to provide proper grounding of the stack is necessary.

At paragraph 3 of the Office Action the Examiner objects to some of the language used in claim 5 as having sufficient antecedent basis. Therefore claim 5 has been edited to eliminate this issue.

Claim 5 was rejected under 35 U.S.C. 102(b) as anticipated by Aiello U.S. 5,965,966. This rejection is respectfully traversed. It is respectfully submitted that this patent shows nothing more than the prior art which is described in the patent application at page 6, paragraph 21, lines 1 and 2 where the application describes that the present invention is intended to eliminate the use of stator clips such as shown in the Aiello patent. Therefore, even in the event of application of the most stringent patent office guidelines, the scope of claim 5 which is a means plus function claim covers only the embodiments described in the application and insubstantial variations thereof. Therefore, the present invention covers the use of features incorporated in the stack over which the e-coating is sprayed. At paragraph 21, the specification expressly eliminates from coverage by the claims the use of a grounding clip such as shown in the Aiello patent.

Therefore, in view of these clear distinctions, reconsideration and allowance of the claims is respectfully requested.

If any matters can be handled by telephone, Applicant requests that the Examiner telephone Applicant's attorney at the number below.

The Commissioner is authorized to charge any additional fees to Deposit Account No. 20-0782 (Order No. STL 2943).

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

The use of these features 304 eliminates the stator grounding clip which is typically used to cut into an [the] e-coating 305 which is provided over the stator laminations. Eliminating this coating ensures grounding of the lamination stack against the conductive surface of the shaft. As shown, the features are rounded; but they may come to a sharper point if such a point can meet the objective of scraping a sufficient amount of the coating off the surface of the features 304 to provide an electrically conductive contact between the lamination stack and the outer surface of the shaft. The inner diameter of the yoke 300 is chosen to be only very slightly larger than the outer diameter of the shaft 200 or base shoulders 227 so that especially with the provision of the features 304, a tight interference fit between the lamination stack and the outer surface of the shaft or base is achieved.

As seen, as the stack is pushed over the surface of the shaft or base, the interference fit with the sharp features 304 will cause the e-coating 305 to be scraped off the ends and sides of the lamination features 304. Thus, stator grounding is achieved with no additional parts or associated costs.

IN THE CLAIMS

5. In a spindle motor comprising a shaft in a hub rotating over the shaft supported by bearing for rotation relative to the shaft, the hub supporting a magnet radially aligned with a stator supported from an outer surface of the shaft, an electrical grounding means incorporated with a inner yoke of [the] stack laminations forming the stator, the grounding means conductively and rigidly fixing the stator stack laminations relative to the magnet while grounding the stator.